ASL

Australian Society for Limnology Inc.

NEWSLETTER

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AUSTRALIAN SOCIETY FOR LIMNOLOGY INC.

The Australian Society for Limnology Inc. (ASL) is an Australian-based scientific society whose focus is the study and management of inland waters. The ASL was established in 1961, and has a current membership of over 650 researchers, managers, engineers, teachers and tertiary level students from all states and territories. Members have a strong professional interest in inland aquatic issues, including the maintenance of biodiversity, the maintenance and/or restoration of water quality, and the wise use of aquatic resources. The Society also has a strong interest in fostering the scientific and intellectual development of tertiary students.

The Society includes members working in government agencies, tertiary institutions and many industries related to aquatic resources. Through their daily activities, members have contact with local communities and are in a sound position to interpret and advise on inland water issues. The Society has a substantial knowledge base, and has assumed a responsibility to ensure that this is available to those who manage inland waters.

Accordingly, the charter of the ASL is to further our understanding of Australia's inland waters and to promote their wise use and sustainable management. In this manner we will contribute to the continued existence of this valued resource and the maintenance and enhancement of the quality of life for all Australians. The ASL regularly produces a newsletter with notes on limnological activities, articles of interest, book reviews and announcements of upcoming events likely to be of interest to Members.

ASL Home Page - http://www.asl.org.au/

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PRESIDENT'S REPORT

2007 has certainly begun with a rush – almost a continuation of the chaotic end to 2006 (Did anyone take a holiday? I suspect not, judging by the amount of email traffic over the break).

The year is also shaping up to be a busy (and exciting) one for the Society. The prolonged drought continues to put pressure on our already stressed rivers and wetlands – and on our politicians, as evident from the PM's $10b water plan; a task force to explore options to develop northern Australia's water resources and, most recently, the Queensland Government's plans to re-examine the Bradfield scheme.

Science Meets Parliament will be held on the 27-28th March and water issues are, as you might expect, firmly on the agenda again. Proposed topics for discussion include "Science, agriculture, water and land use in Northern Australia" and "Managing water and drought". "Improving science and mathematics education" is also up for discussion and I hope to raise the issue of Australia's future capacity in water science and what can be done to encourage and retain young researchers. ASL will be represented by at least 3 members, including myself, so please get in touch if you wish to have any other specific issues raised.

Many of you will be aware of the proposed National Collaborative Research Infrastructure Strategy (NCRIS) capability area: Terrestrial Ecosystem Research Network (TERN). TERN is likely to involve a nationally co-ordinated network of hubs to provide overarching strategy and direction to Australia's ecosystem observing effort, which will include freshwater and coastal ecosystems. Paul Perkins (the TERN facilitator), assisted by Graham Harris and Andrew Campbell are coordinating a series of consultation meetings across the country. So if you have any ideas on national research infrastructure needs for freshwater (or saline) ecosystems, I would encourage you to read through the TERN Roadmap information and attend one of these meetings. Alternatively, you can contact me (I am on the TERN science reference group) and I can pass on any information (and claim any good ideas as my own!).

The new Executive should have had their first meeting for 2007 by the time you receive this newsletter. I encourage you to get in touch with your regional executive member if you have any issues or concerns – (limnological ones at least) – and make sure you keep sending your news and views to the Newsletter Editor (Ross Thompson). Last newsletter, featured bios of our new Executive Committee members – please note that NSW members are not being represented by Andrew Brooks @ Griffith University – apologies to the NSW Andrew Brooks. We hope to have the web information updated as soon as possible.

All the best for 2007.

Stuart Bunn **5 March 2007**

EDITOR'S NOTE

Dare I mention the cricket?? Of course I do!! Thanks for the Hadlee-Chappell Trophy and perhaps we'll let you win at least ONE game next time (I've got to enjoy these moments when they happen - they're all too rare). I just hope the World Cup goes as well.

Here in Victoria we are entering another winter with the need for rain becoming all the more desperate. I have just spent a few days working up in the north east of the state around the town of Corryong. The drought up there is hitting hard, with even large creeks reduced to pools or dried up entirely. It really was very sad to talk to the farmers whose land we were working on and hear what dire straits they are in. It certainly makes me smile to remember what we would have called a drought in New Zealand!! Remind me not to try and study fish in an Australian drought again!!

This is a thick newsletter and there are many things of note ... in particular the upcoming joint meeting of ASL and NZFSS in Queenstown, New Zealand. The conference, subtitled 'Water, an inconvenient truth' should be fantastic, with a stunning location and what looks already to be a excellent program in place. I'm looking forward to it already!! For more details see the Conference announcements section later on in the newsletter.

Thank you to all the people who contributed in such a timely manner for this edition. I know everyone is busy and I greatly appreciate the contributions - it makes my job so much easier. But where is the humour and salacious gossip?? There must be something happening out there along the lines of funny stories and embarrassing photos !! So let me know. **The deadline for the next edition will be June 1st.**

Ross Thompson

SPECIAL REMINDER: ASL SUBS ARE NOW DUE - see the last page of this newsletter for details on how to pay.

This Newsletter is printed by Border Multi Print Pty Ltd Wodonga,
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Membership Information and contact details of the Regional Executive Members can be found at the back of this Newsletter.

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ANNOUNCEMENTS

AUSRIVAS Online and Watercourses Online

The first module of the next AUSRIVAS Online course has just begun, but it's not too late to enrol and start, and there's plenty of time left to enrol in the other modules! You can also still enrol in Watercourses Online, especially the modules that have no face-to-face component.

AUSRIVAS Online training aims to teach the skills and knowledge needed to assess river health to an acceptable standard using the Australian River Assessment System (AUSRIVAS) methods. Those who complete its requirements successfully are eligible for accreditation from the relevant state or territory agency.

The four interactive modules can be completed entirely online over 12 weeks. A 4-day practical face-to-face workshop, usually in Canberra, is offered as a fifth module, teaching the practical skills required.
To enrol or to discuss the workshop location, please contact Sue Nichols <sue.nichols@canberra.edu.au>. Course details are available at <http://ausrivas.canberra.edu.au/Bioassessment/Macroinvertebrates/Training/>.

'Watercourses Online' is a set of online training courses, designed primarily to support personnel in water management, natural resources management, environmental education and ecological consulting. The three courses currently offered are:
* Ecology and River Function
* Catchments: their Character, Waters & Chemical Composition
* Waterway Assessment.

For more details, or to enrol, please visit :
<http://freshwater.canberra.edu.au/WatercoursesOnline.nsf>,
Or contact:
Prof. Richard Norris <richard.norris@canberra.edu.au>, ph 02 6201 2543
Sue Nichols <sue.nichols@canberra.edu.au>, ph 02 6201 5408;
Prof. William Maher (for Catchments module only), n
<bill.maher@canberra.edu.au>, ph 02 6201 2531.

2007 Professional Scientist Remuneration Survey

In late 2005, the Association of Professional Engineers, Scientists and Managers, Australia (APESMA) ran the Professional scientists remuneration survey in conjunction with FASTS and FASTS members.

The 2005/6 survey provided some quite interesting and useful data on average salaries and salary change at the disciplinary level.

As we had a strong positive response from members APESMA and FASTS have decide to do the survey on an annual basis.

Please note that assuming a sufficient response rate, the data can be disaggregated and reported for each society. Another good reason for you to encourage your members to participate in the survey - including those who work in the private sector.

The questionnaire for the 2007 Professional Scientists Remuneration Survey is now available for completion at: www.apesma.asn.au/vsurveys/sci

The closing date for survey completion has been set as Friday April 6, 2007.

Bill Williams Travel Scholarship (BWTS)

Applications are invited from research students for financial assistance in the form of the Bill Williams Travel Scholarship (BWTS) to enable them to present a paper or poster at an overseas conference, symposium or workshop. Bill Williams was a founding member of the Australian Society for Limnology, a leading pioneer of limnological research in Australia and widely known both inside and outside the country for his advocacy of the study of inland waters. He was very conscious of the need to encourage international exchange amongst limnologists, hence the inauguration of this scholarship.

The purpose of this scholarship is to enable research students to present their work in an international forum. Students who are carrying out research in any branch of limnology for a postgraduate degree (but not an Honours degree) are eligible to apply. The following rules apply:

1. Applicants must be current postgraduate students at any Australian University or have submitted their thesis within 12 months of applying for the BWTS.

2. Applicants must have been members of the ASL for at least 12 months and have current financial membership.

3. The BWTS will be awarded by a committee consisting of the ASL President, the ASL Treasurer, and a representative of the Bill Williams Memorial Committee.

4. Applications must include a written statement (no more than one A4 page) describing the research, its significance, and the stage that has been reached. The statement must be endorsed by the student's supervisor, who should confirm that the student has reached a stage where something useful can be presented. An abstract of the paper that the applicant proposes to present must also be included, and the presentation must acknowledge the scholarship in full. A CV should be included.

5. Applicants must submit a budget indicating the various costs of their trip. This should indicate how the scholarship will be used and what other support they hope to obtain. The intention is that the scholarship will cover a substantial amount of their costs, e.g. an airfare.

6. Award of the scholarship will be judged on: (i) significance of the work; (ii) originality and soundness of the research; (iii) the progress made; (iv) ability to present a clear and concise statement of the study.

One scholarship will be awarded next financial year (2007-08). Applications should be sent to Dr R.Marchant, ASL Secretary, Museum of Victoria, GPO Box 666E, Melbourne VIC 3001 by 18 Oct 2007.

(Those students looking for support to attend the NZ joint congress in Dec 2007 should apply for Student Travel Awards, not the BWTS)

Student Travel Awards for the 2007 joint ASL - NZ Freshwater Sciences Society

Applications are invited from research students for travel assistance to attend and present a paper or poster at the Annual Congress of the Australian Society for Limnology. The purpose of this assistance is to encourage students to present the results of their work in public. Students who are carrying out research in any branch of limnology for a higher degree are encouraged to apply. The following rules apply for assistance:

1. Applicants must be full-time postgraduate students at any Australian University. There is no age limitation. Applicants must have current financial membership of the ASL for at least 6 months.

2. Assistance will be granted on the recommendation of a panel of three appointed by the Society.

3. Applications must include a written statement of no more than 200 words describing the research, its significance and the stage that has been reached. This statement must be endorsed by the student's supervisor. An abstract of the paper that the applicant proposes to present must also be included.

4. Award of assistance will be judged on: (i) significance of the work; (ii) originality and soundness of the research; (iii) the progress made and whether the stage has been reached where something useful can be presented; (iv) ability to present a clear and concise statement of the study.

5. Applications must be lodged with Dr Richard Marchant, Museum of Victoria, GPO Box 666, Melbourne VIC 3001, by15 July 2007. Applications can be sent by email to rmarch@museum.vic.gov.au

ASL Poster Grants

The executive has decided to make small grants available to those students who wish to present a poster at an ASL congress. The aim of this award is to help cover the production costs associated with a poster. The society hopes this will encourage reluctant students to present a poster and thus to benefit from the experience of presenting their work to fellow limnologists.

The rules for applying for this grant are:

1. Applicants must be full-time postgraduate students at any Australian University. There is no age limitation. Applicants must have current financial membership of the ASL for at least 6 months.

2. Assistance will be granted on the recommendation of a panel of three appointed by the Society.

3. Applications must include a written statement of no more than 200 words describing the research, its significance and the stage that has been reached, as well as an estimate of the cost of producing a poster. This statement must be endorsed by the student's supervisor. An abstract of the poster that the applicant proposes to present must also be included.

4. Award of assistance will be judged on: (i) significance of the work; (ii) originality and soundness of the research; (iii) the progress made and whether the stage has been reached where something useful can be presented; (iv) ability to present a clear and concise statement of the study.

5. Applications must be lodged with Dr Richard Marchant, Museum of Victoria, GPO Box 666, Melbourne VIC 3001, by15 July 2007. Applications can be sent by email to rmarch@museum.vic.gov.au

I don't think we can ignore these data; after all, his book was on the best-seller list.

Position Vacancy: Ramsar Convention Secretariat

Regional Affairs Officer, Gland, Switzerland
Starting date: as soon as possible after 1 July 2007

The main focus of the work of the Regional Affairs Officer will be to provide support to the Secretariat's regional teams in their advice and guidance on national and regional implementation of the Ramsar Convention to Contracting Parties and other stakeholders. It is a full-time P1 (first-level professional) position based at the Secretariat in Gland, Switzerland.

Selection Criteria and Qualifications

1. The principal qualities required are enthusiasm and a commitment to environmental conservation and sustainable development issues, including issues related to wetlands and water management.
2. A University degree (preferably a post-graduate degree) in a subject relevant to environmental management, wetland conservation and/or sustainable use.
3. Experience of data and information management, including software applications.
4. A minimum of 4 years' professional experience in environmental conservation, of which at least one should be at the international level; experience of developing countries being an advantage.
5. Full ability to work in English. The ability to work in the two other Convention languages, Spanish and French, is a clear advantage.

Applications should include:

a) An application letter in English of no more than two pages, briefly describing the suitability of the candidate for the post in relation to each of the selection criteria and qualifications listed above.
b) A maximum one-page statement on the applicant's interpretation of the main regional challenges facing the work of the Convention Secretariat.
c) A complete curriculum vitae.
d) The names and contact details (including e-mail and telephone) of three referees, including one recent employer.

E-mail applications are preferred. They should be sent only to the following address before 10 April 2007 : jobapplications@iucn.org

For more information contact: Dwight Peck, Communications Officer, Convention on Wetlands, CH-1196 Gland, Switzerland, peck@ramsar.org

Position Vacancy: Lecturer, RMIT, Melbourne

RMIT has vacancy for a lecturer/senior lecturer in Ecotoxicology/ Environmental Biology. This is a teaching position and the candidate should be able to run field trips and teach Marine Biology and Eccology and teach Animal Diversity and Physiology, plus research potential/track record for details please check the website at:
http://www.rmit.edu.au/browse;ID=pee82tf2xx7p
Closing date extended to 15th March.

Position Vacancy: Invertebrate ecologist – James Cook University, Townsville

Owing to the departure of my colleague Niall Connolly to another pasture (EPA), I am seeking to appoint a replacement to work on a project developing indicators of ecosystem health in the wet and dry tropical catchments of the Great Barrier Reef. Appointment initially for one year, but with good prospects for extension to three years, on a Marine and Tropical Science Research Facility project (part of the CERF scheme). Essential selection criteria include: good Honours degree in stream/wetland ecology; extensive experience in field ecology, including survey design and logistics; demonstrated knowledge of Australian freshwater invertebrates; good understanding of the physical, chemical and biological bases of water quality; clear capacity for timely reporting; and excellent statistical, presentation (verbal, written) and interpersonal skills. Desirable criteria include postgraduate qualification; good publication record (relative to experience); experience in experimental ecology; immediate availability; tolerance of supervisor's "humour."

Contact Prof Richard Pearson via phone (07 4781 5466) or email (richard.pearson@jcu.edu.au).

OBITUARY

James (Jim) Wharton

James Colin Forbes Wharton died peacefully at his home at Lennox Heads, Queensland, January 24, 2007

Jim Wharton was a member of the inaugural executive committee of the Australian Society for Limnology which was founded in 1962. Jim served as Secretary/Treasurer of the Society in 1961-62 and again in 1969-1971 and 1972-73. He remained a member of the society until the year 2002.

Jim was Deputy Director and then Director of the Department of Fisheries and Wildlife in Victoria. He later moved to Lennox Heads, where he became a Consultant to the Australian-American Fisheries.

ASL sends their sincere condolences to Jim's wife Jenny, his children and his many grandchildren.

ASL TELECONFERENCE MINUTES

9 March 2007.

Present: A.Brooks, H.Balcombe, R.McIntyre, D.Baldwin, M.Hart, M.Reid, S.Bunn, R.Marchant
Apologies: S.Schreiber, B.Downes, M.Douglas, B.Zampatti, L.Sim, D.Warfe

1. Building capacity in water science:

It has been quite widely recognised that there is limited capacity in Australia to expand water science because too few undergraduate and graduate students are attracted to this area of knowledge. S. Bunn suggested that the ASL should get involved in this issue by promoting limnology as a career to students. He felt it was a topic that should be raised at the forthcoming Science Meets Parliament (SMP) event and suggested that the ASL should write to the National Water Commission about it. Others agreed with the sentiments. A.Brooks commented that few or no positions for aquatic scientists had been advertised in his government department (NSW Natural Resources) over the last decade and that there were no obvious career paths for graduates or students. D.Baldwin added that little attempt was made to introduce aquatic subjects to high school science curricula. The posters printed some years ago by ASL promoting limnology as a subject are still available and could be distributed to high schools and among first year university students. S.Bunn will put a note in the ASL newsletter asking for members who might like to pursue this matter and will draft a letter to the National Water Commission outlining these concerns.

2. ASL's position on inland water controversies:

The ASL has been asked to promote various environmental issues concerning inland waters, the latest being opposition to the new weir proposed in the lower Murray in SA. As a society the ASL adopted a policy some years ago of not becoming directly involved in the promotion of such environmental issues. Instead, the society has referred groups making such requests to the ASL's list of experts. One of these may be willing to advise and bring to bear expert knowledge on a particular problem.

3. Taxonomic workshops:

In the past such workshops have been run by the Murray Darling Freshwater Research Centre with initial funding from the CRC for Freshwater Ecology . J.Hawking organised these events, which were regarded by many as very successful because they resulted in the dissemination of specialist taxonomic knowledge to those most likely to use it. S.Bunn noted that training workshops (particularly taxonomic ones) were now regular features of the annual NABS meetings and suggested that the ASL might do something similar at its annual congress. P.Suter (La Trobe Uni, Wadonga) may be prepared to organise such workshops and it was suggested that organisers of future ASL congresses should consult him about this matter.

4. Joint congress of the ASL and the NZ Freshwater Sciences Society, Dec 2007:

This will take place in Queenstown on 3-7 December. No more information has been forthcoming. R.Marchant will get in touch with B.Robson, who offered to liaise with the NZ organisers, to determine if there is further news. He will also send an advertisement for the student travel awards to the next newsletter emphasising that this year the closing date will be July 15.

5. Future ASL congresses:

M.Lund has offered to host the 2008 congress in WA, but no other details are currently available. A tentative offer to host a congress at Wollongong NSW has been made by S.Williams (NSW Natural Resources).

6. Lakes and Reservoirs of Australia:

The editors of this book have emailed S.Bunn, R.Marchant (and probably others) about suitable authors for a section on lake benthos. Replies have been sent to the editors.

7. ASL website:

Various details on the website about ASL officers need updating. S,Schreiber has asked H.Shearer (webmaster) to make these modifications. M.Hart and S.Schreiber will be meeting in early April to make a list of all modifications required.

8. Science Meets Parliament:

Three ASL members will attend this event - S.Bunn, D.Baldwin and R.McIntyre. If members have ideas about topics they should get in touch with one of these three.

9. National Collaborative Infrastructure Scheme:

This is an initiative of the Federal Govt and one part of this scheme will support a Terrestrial Ecosystem Research Network (including freshwater habitats). S.Bunn is an advisor on this scheme and members should get in touch with him for more details.

10. ASL finances:

M.Hart reported that the society made a profit of $26,000 from the last congress in Albury-Wadonga. This was a result of the large amount of sponsorship money ($37,000) raised by the organisers, particularly R.Sinclair. The executive agreed to write thanking her for her superb effort. The ASL has a total of $172,000 in various accounts, as well as $43,000 in a separate account for the Bill William Travel Scholarship. Enough interest will have accumulated in the last account to be able to offer a scholarship for the 07-08 financial year. R.Marchant will advertise this scholarship in the newsletter.

11. Poster grants:

R.McIntyre suggested that the society might consider providing small grants to cover the production costs of posters presented at congresses. She thought a small grant, e.g. $50-100, might persuade some students reluctant to present their work to do so. This was considered a good idea and R.Marchant will produce a notice about such grants for the next newsletter. The rules for applying for these grants will be identical to those used for the student travel awards.

Next teleconference: June 15.

A BIT OF FUN ~ KEEP THOSE LETTERS COMING !!

Ask Onmil all the tricky limnological etiquette questions you really want answered!!

Anne Watson from UTas writes to ask if anybody else has found an alcoholic stonefly? Having been collecting kick samples from the Macquarie River in Tas, but with too many things to do, Anne has found the bugpicking is going slowly. So, a sample from July last year, 'preserved' with 70% ethanol, picked in January 2007, should not have had one live Gripopterygidae, Leptoperla varia, quite happy swimming around with all the dead bugs, but with very little leaf litter left. Sadly it died in clean river water, which says something about an alcoholic life, maybe...
The only other bug Anne has heard of surviving was a Eusthenid stonefly which ate all the other bugs, and may not have been properly preserved in the first place.

Any records from other labs?

Omnil speculates in an idle way that perhaps Anne may have been spending a little TOOOOO much time staring down that microscope. Regardless, it's the last time that Omnil is drinking water, nasty horrible stuff could kill you.

INFORMATION FROM AND FOR MEMBERS

"What plants were in our lakes and wetlands?": Report of a plant remains workshop, University of Adelaide, 15-19th January.

With support from the ARC funded Environmental Futures Network, John Tibby and Jennie Fluin organised a plant remains workshop at the University of Adelaide. The course was delivered primarily by Drs Carl Sayer and Tom Davidson of the Environmental Change Research Centre, University College London and attended by participants from University of Adelaide, ANU, University of Canberra, Flinders, Macquarie and Monash Universities, University of Tasmania and the Environment Protection Authority, Victoria. The workshop examined how plant seeds, leaves and other assorted "bits" extracted from recent deposited sediment can used to understand how aquatic plant composition and abundance has changed over the last 40 to 40,000 years. Workshop topics included:

1. Determining restoration targets using plant remains
2. The ecological structuring role of plants in shallow lakes
3. Production, dispersal and preservation of plant remains

Examples of Australian work were presented by Tara Lewis (Monash), Michael Reid (Canberra), Susan Rule (Monash) and John Tibby (Adelaide). Tara and Sue discussed the use of plant record for reconstructing climate change in, respectively, Western Victoria (focussed on Lake Surprise) and NE Queensland (Lynch's Crater), Michael highlighted the utility of plant-associated animals for understanding European impacts on plant cover (particularly in the absence of plant remains themselves), while John discussed European impacts on plants from the coastal sites, Lake Ainsworth (NSW) and The Coorong (SA). Both Tara and John's presentations highlighted recent localised extinctions of plants from study sites.

The workshop was a great success, tremendous fun (including poetry delivered by presenters and participants alike!) and illustrates that we are at the tip of a large and interesting iceberg in terms of our understanding of pre-impact plant communities in Australia.

For further information see:

Davidson, T A., Sayer, C.D., Bennion, H., David, C., Rose, N., Wade, M.P. 2005. A 250 year comparison of historical, macrofossil and pollen records of aquatic plants in a shallow lake. Freshwater Biology 50, 1671-1686.

Reid, M., Sayer, C.D., Kershaw, A.P., Heijnis, H. in press. Palaeolimnological evidence for submerged plant loss in a floodplain lake associated with accelerated catchment soil erosion (Murray River, Australia). Journal of Paleolimnology.

Sayer, C.D., Jackson, M.J., Hoare, D.J., Waldock, M.J., Simpson, G.L., Boyle, J.F., Jones, J.I., Appleby, P.G., Liptrot, E.R., Henderson, A.C.G. 2006. TBT causes regime shift in shallow lakes. Environmental Science & Technology 40, 5269-5275.

BOOK REVIEW

The Complete Field Guide to Dragonflies of Australia

by Gunther Thieschinger and John Hawking.
2006, CSIRO Publishing, pp. 376. $49.95

Both the authors of this comprehensive guide have been studying Odonata for much, if not all, of their professional lives. Indeed Gunther Theischinger was a co-author of "The Australian Dragonflies", published in 1991, along with Tony Watson and Hilda Abbey. That book largely dealt with adults and keys were only provided for that stage of the life cycle. The current volume can be seen as a "descendant" of the former publication and for the first time provides keys to the final instar larvae as well as to the adults, thus making it a useful, if not an essential, reference for the many freshwater biologists like myself who encounter these larvae. In what follows I have restricted my comments largely to the larvae, as this is where my experience lies.

A total of 324 species are described and illustrated from 12 families of damselflies and 18 families of dragonflies. Photos of adults and line drawings or photos of many larvae are given, although for a number of species larvae are still not known. Distribution details are provided on maps of Australia divided into 16 regions. (These are the same regions employed by Watson et al. in 1991.) The bulk of the book (pp.16-299), however, comprises species accounts which, in addition to descriptions of the adults and larvae, give habitat notes for almost every species and information about extra-limital distribution where relevant. Descriptions of the larvae are somewhat shorter than those for the adults but together with the keys, that follow the species accounts, they should enable genera and many species of larvae to be readily determined. Unfortunately, not all species can be keyed at the larval level. However, the distribution maps should help here. Only the final larval instar is described and illustrated and users need to realise that more immature larval stages will always be more difficult to put to species, as is the case for the larvae and nymphs of nearly all aquatic insects.

I worked my way through the larval key to families and generally found it easy to use. Separate larval keys are given to genera and some species for each family. An illustrated glossary is provided for both adults and larvae (before the keys). Such details are vital for beginners who need to know their way around the anatomy of both larvae and adults if they are to be successful in identifying specimens. The only omission I noted was that the 'frontal plate' of a larva was not illustrated in the family key or in the glossary. However, it is illustrated in the species accounts

for Archaeosynthemis and Synthemis and in the key to Synthemistid genera and species. It is a pity that the informative glossary of terms associated with larval anatomy given by the two authors in an earlier publication (A guide to the identification of larvae of Australian families and to the identification and ecology of larvae from NSW; CRCFE Identification Guide No. 34, Feb 1999) is not repeated in this book.

I feel sure this book will enable enthusiasts, both amateur and professional, to identify Odonata accurately and will greatly encourage study of this fascinating group of insects. In many parts of the world various groups of aquatic insects are poorly known because identification keys for the non-specialist are simply not available. By providing such keys the authors have given a great stimulus to studies (particularly field studies) of Odonata in Australia. The small size of the book (A5) will encourage its use in the field and with experience identifications could be done on site, as the authors hope. The book should also pave the way for more concern about the conservation of dragonflies and damselflies, some of which have limited distributions.

I cannot recommend this book highly enough to those interested in Australian Odonata and freshwater habitats. It will appeal to everyone from beginners, to students and researchers and should become the first reference book that anyone interested in Australian Odonata will consult.

Richard Marchant,
Museum of Victoria
(to be published in Victorian Naturalist)

SCIENCE SNACKS – A TASTE OF RESEARCH

"Massive Microbial Mattresses" and Fish Death: Threats to Microbialites in Lake Clifton ,Western Australia

Jacob John Dept Of Environmental Biology Curtin University GPO BOX U 1987 Perth WA 6845

Lake Clifton, a coatal lake located 120 km south of Perth in Yalgorup National Park, the largest conservation reserve in the Swan Coastal Plain is well known for the largest array of Thrombolites in the world (a type of Microbialites similar to the Stromatolites in Shark Bay). Microorganisms, predominantly cyanobacteria, which were abundant forms of life on earth 3500 million years ago, build Microbialites. Lake Clifton is one the rare water bodies in the world with relatively young living microbialites in low salinity. The benthic microbial communities, which build these structures, are believed to have evolved to survive in low nutrient conditions.

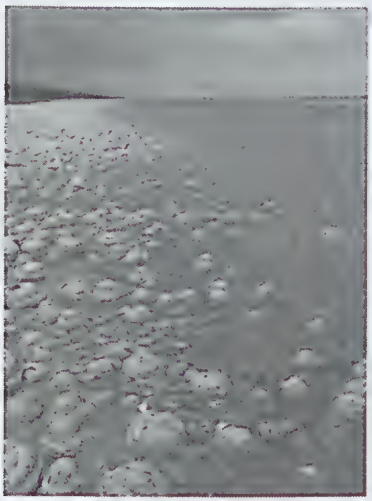
The salinity in Lake Clifton seldom exceeded that of seawater in the 1980s when the microbialites were discovered, described and investigated for the first time by Linda Moore. Hyposalinity and interaction between fresh ground water and microbial communities were considered to be essential for the continued growth and conservation of microbialites. The lake undergoes seasonal changes in salinity ranging from 7 to 35 ppt.according to records of 1980s . However, data collected by dept of Conservation and Land Management suggest that salinity has been increasing in Lake Clifton over the past 20 years. Additionally, there have been reports of increasing nutrients discharged from the catchment resulting in symptoms of eutrophication such as proliferation of the green alga Cladophora .

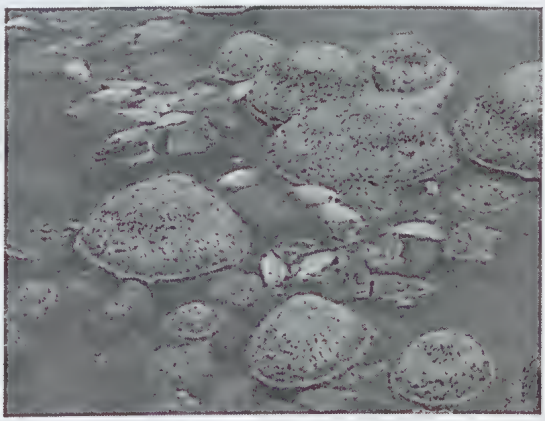
I myself observed in 2003 and 2004 salinity levels reaching above 60 ppt in summer. Cladophora, a filamentous-branched green alga, was found to be of common occurrence in the lake. In 2002 there was massive break up of thick benthic microbial mats from the bottom of the lake floating and rotting during the autumn period. This was suggestive of increased nutrients and salinity.

In February 2007 there was again massive break up of benthic microbial mats, with pieces up to 40 cm thick floating and discolouring the water with massive fish death. A type of black bream -which is very light coloured have been enjoying the abundant supply of food available here in recent years- a sign the lake is turning eutrophic. These floating microbial mats are so thick that they deserve to be called "mattresses " rather than mats. Having studied the composition of actual microbial communities responsible for microbialite growth, I can confirm that these mattresses are different in composition. On microscopic examination, these cohesive microbial mats were found to be made of coccoid cyanobacteria and

diatoms. There are over 50 species of diatoms and three species of cyanobacteria in the mat., they look like chocolate pudding in colour and consistency. Most of the microbial mats I have observed in other salt lakes in Australia are . much thinner-seldom 10 to 20 cm in thickness. Usually the bottom part of the mats get decomposed as new growth is added onto the top. The origin, development, composition, spatial distribution and conditions responsible for their breakages, adding to the nutrient enrichment of the lake and possible impacts on the conservation of the microbialites, remain unknown. The fish death may be attributed to high salinity, perhaps beyond the levels to which they have been adapting.There might have been anoxic episodes associated with lifting and floating of microbial mats ,though the oxygen levels measured appeared to be high . The high salinity and nutrients evidenced by high Cladophora populations seem ominous signs for the survival of thrombolites which are built by microbial communities under lower salinity and oligotrophic conditions. From what is known about the conducive conditions required for the conservation of microbialites, these developments are of great concern.

What is the distribution pattern of the thick benthic algal mats? Under what circumstances do they break up and float? What is the rate of their growth? How do they respond to increasing salinity and nutrients? What is the impact of this massive break up benthic algal mats on the ecology of the lake without any outlet that can flush nutrients out? Have the living microbialites been affected? All theses and more dealing with conservation issues are currently the challenges of my new PhD student Jennifer. We are now intensely studying the algal mattresses . Anyone interested in microbial communities may contact me
J.John@curtin.edu.au





REPORTS FROM THE TRENCHES

ENVIRONMENTAL FLOWS ASSESSMENT PROGRAM (EFAP), QUEENSLAND NATURAL RESOURCES AND WATER

Queensland Government

The Environmental Flows Assessment Program (EFAP) monitors the natural ecosystem component of the Water Resource Plan (WRP) performance assessment for Qld Rivers. The assessment process will evaluate how effectiv e current water management strategies of a WRP are in providing the critical flow related conditions required to achieve ecological outcomes in a WRP area, using the critical water requirements of ecological assets as indicators of performance. The program comprises of 4 regional teams, including South East, South West, Central West and North regions and comprises of over 15 scientific staff from a variety of disciplines.

South East Team

The South-East team (Andrew McDougall, Tom Espinoza, Shane Moloney and Luke Galea) welcome the newest member to the extended EFAP team, Douglas Harding. Douglas has taken over the temporary aquatic ecologist role in Brisbane left vacant by Marcus Finn and will reside in the position up until mid-2008.

Selection of 'Ecological Assets' used to assess state-wide WRP has been completed for the Burnett and Boyne WRP areas, and will soon be finalised for the Mary, Baffle and Calliope catchments. Douglas Harding will also have a major role in progressing asset selection for the Moreton, Gold Coast and Logan WRP areas. The other major endeavour of the SE team has been the implementation of monitoring programs that align with WRP ecological outcomes and Environmental Flow Objectives (EFO). Precluding this work is the promotion of interaction with Technical Advisory Panels (TAP) for the development of realistic and reportable ecological outcomes for upcoming WRP's.

Tom Espinoza (Thomas.Espinoza@nrw.qld.gov.au)

South West Team

South-west aquatic ecologists (Charles Ellway, Tariq Khan, Andre Prior and Minal Khan) are working on EFAP in Queensland Murray Darling catchments. The team has undertaken identification and selection of flow dependent ecological assets for all these catchments. Currently the team is assessing the risk posed to the selected flow dependent ecological assets under the current water management compared to pre-development using flow statistics from the hydrological IQQM model. The team is also gearing for the 2nd round of macroinvertebrate sampling for MDBC's

Sustainable Rivers Audit (SRA) in Queensland Murray Darling catchments. Currently sites are assessed for sampling suitability by undertaking aerial survey and sampling for macroinvertebrates will commence in mid April.

Tariq Khan (Tariq.Khan@nrw.qld.gov.au)

Central West Team

The Central West team (Bernie Cockayne and Kate Engledow) have been working furiously in the Fitzroy Basin collecting egg and larvae samples from a number of flow spawning fish species, including Golden Perch, Hyrtl's and Black Tandan, Leathery Grunter (Scortum hillii) and Spangled Perch. The aim of this long-term program is to gather as much information as we can about the spawning strategies of these species such that we can use this information to better inform future WRP's. Stay tuned as we are planning on presenting some of this data at the up-and-coming ASL conference.

The Central West team also covers the Pioneer, Whitsunday and Georgina/Diamantina basins. The selection of ecological assets is being completed for the Pioneer and will soon start for the remaining catchments.

On a more interesting note, staff from the Central West and South East were involved in a Crocodile awareness training day in Rockhampton. As you'll gather from the below photo the training was an exciting experience albeit a little scary at times.

Bernie Cockayne (Bernie.Cockayne@nrw.qld.gov.au)

Northern Team

The North Region Team (Richard Hunt, Michaelie Pollard, and Melanie Blanchette) have completed a pilot study of relationships between flow and periphyton in the Barron River, as part of an investigation of the flow requirements of carbon cycling and stream metabolism for rivers in the Wet Tropics. Michaelie is now developing approaches for determining environmental flow requirements in regulated streams for endangered Wet Tropics frog species, whilst Melanie is compiling an inventory of Ecological Assets for the Burdekin WRP.

Richard Hunt (Richard.Hunt@nrw.qld.gov.au)

RIVERINE LANDSCAPES RESEARCH LAB, UNIVERSITY OF CANBERRA

Things have been busy at the Riverine Landscapes Research lab at University of Canberra over the last six months with a workshop, several comings and goings, projects commenced and completed. Things started with a bang with the "Fundamentals and Frontiers of Floodplain River Research and Management Workshop" starring James Thorp, Klement Tockner, Peter Cullen, Martin Thoms, Tony McLeod, Neil Saintilan, Jon Marshall, John Tibby, Michael Reid and Ben Gawne on September 21st, 2006.

We have said goodbye to: Johanna Boulos, who has returned to her native Lyon after her long tussle with the differential GPS and hydrological models; Nick David, who has escaped to the corporate world after his valiant, but ultimately futile, attempts to convert his workmates to the joys of Texas Hold 'em.., oh yes, and all that GIS work too; and Erin Lenon, who has retired to Captain's Flat to build that pizza oven she has been promising us for two years. Craig 'the man' Boys and Cath 'saint' Francis have both successfully completed their PhDs and as a result have been released on good behaviour.

But it hasn't all been goodbyes, we have also been able to welcome Celeste 'it is a real tan' Harris, who spends her day tricking Arc GIS into doing the things she wants it to do; and Melissa 'the Vicar' Parsons, who has been conned into returning to the Lab after several fruitful years on a post-doc in South Africa.

We have also had the pleasure of hosting a bunch of summer slaves...I mean 'students' in the group: we have had Dan 'I am the walrus' Crowle, who has been helping out on a study of the effects of flooding and grazing on Black Box woodlands on the 'bidgee; Andy 'keep your pants on....please' Lowe, who has been helping Maxie out with his dirt and Munique with something down in the greenhouse (?!); Kath 'you are making me work on that microscope?' Tibbetts, who has been studying water policy in between searching for tiny versions of tiny things on a substandard microscope; and, Berlinda 'I am at lunch' Bowler, who has been doing some very nice tracing out in the map room....

As for the rest, Martin Thoms has managed to find some time to visit us in the office in between overseas trips to Scotland, Minnesota and NZ, where he attended the Ecohydraulics conference. Apart from stowing away in Martin's baggage on trips to Minnesota and NZ, Michael Reid has been busy with the development of the Vegetation Theme of the MDBC Sustainable Rivers Audit and writing up papers on ecohydraulics, food webs, and floodplain vegetation. Scott Rayburg has also been sucked into the vortex that is the MDBC Sustainable Rivers Audit and has recently been awarded funding to examine something about salt and vegetation in Western NSW. Vic Hughes, Mark Southwell and Rob Cossart have been making a big mess in the tearoom, but have still managed to make great progress in writing up their theses - hopefully then someone will clean the melted cheese off the toasted sandwich maker. Munique Webb has gone from RA to Masters student, and will be dividing her time between UC and the US on account of having Jim Thorp at the University of Kansas as a co-supervisor. She has maintained her role as the UC pin-up princess. Let's not forget the quiet achievers: 'Nolani 'blue' McColl, who has been beavering way completing the Narran KE work; Desley 'massey' Ferguson who keeps us all on track; and Alie 'alie' Cowood who keeps the journal issues ticking over and beats Martin up. All in these back room movers and shakers have been doing what they do best, working hard and making sure the rest of us wash at least a couple of times a week.

Michael Reid

Mike Delong (left) of Winona State University, Minnesota, tells Martin Thoms he needs to relax more during a day on the mighty Mississippi, October 2006.

Michael Reid (right) does a better job than Martin of looking like he's working while on the boat with Mike Delong.

We don't know why he's wearing a dress either – Maxie's best side, Riverine Landscapes Research Lab end of year dinner, December 2006

Munique (centre) and Celeste's (right) attempt at sultry given the finishing touch by Dan who looks like he's just stubbed his toe.... Ouch! (RLRL end of year dinner, December 2006).

What's the deal with all the kilts? The theme was tattoos.
Scott Rayburg and Mel Neave arrive from the same planet as Maxie

"He's giving a speech! Of course we NEED more wine". Bruce Ferguson (Hubby of Des) and Scott Rayburg tantalisingly close to drunken oblivion as Martin begins his speech (RLRL end of year dinner, December 2006)

AUSTRALIAN RIVERS INSTITUTE, GRIFFITH UNIVERSITY, BRISBANE

David Sternberg, has just commenced working as an RA on the eWater, F2 (Rivers and Floodplains) project in the Moonie River with Harry Balcombe and Angela Arthington. David did his undergraduate program at Griffith and did a final year project with ARI examining spatial and temporal diet shifts of bony bream and yellowbelly in the Moonie River. Mark Ponniah has departed ARI to the business world, while Dan Schmidt has moved in to continue where Mark left off. Dan has left the cosy dry world of butterflies and will now be getting wet. He will be lecturing in genetics and researching genetic patterns of biota in the Moonie River on the eWater A1 (Landscape Ecology) project. Harry Balcombe, David Sternberg and Angela Arthington spent some time in the Moonie River in late January along with a number of NRW researchers to sample fish as part of an ongoing NRW project examining the use of ecological assets (in this case fish) to use as tools for monitoring the effectiveness of Water Resource Plans. The field work also served as a scoping study for the F2 project, which along with A1 will be examining population structure (and the many factors affecting) of fish, turtles and invertebrates in The Moonie River. These two projects will also have southern components, but will run in tandem in the Moonie River. Other staff working on these projects include Jane Hughes and Giovanella Carini, and NRW staff: Jon Marshall, Jaye Lobegeiger, Sharon Marshall and Satish Choy. Adam Kerszy continues gallivanting around the Lake Eyre Basin sampling fish as part of his Phd. He recently caught the summer floods in the Cooper Creek catchment and Bulloo River, so he has lots of nice data to compile on fish size structure and recruitment patterns. However, before we can actually tie him to the desk he is heading out to the LEB in April to do a broader survey, extending to the Georgina-Diamantina catchment in addition to his usual sampling regime. Tom Rayner (JCU) jointly supervised by Brad Pusey and Richard Pearson (JCU) has had his PhD thesis passed. Tom studied seasonal variation in food web structure in a tropical lowland river.

Stephen (Harry) Balcombe

DEPARTMENT OF ENVIRONMENT AND CONSERVATION, WESTERN AUSTRALIA

Department of Environment and Conservation

After 22 years of aquatic research and inventory for DEC, Stuart Halse has resigned to test life as a private consultant with his own company Bennelongia. Resignation has been contagious and Mike Scanlon, Harley Barron, Leah Stratford and Ben Smith have also recently left.
Meanwhile Adrian Pinder, Mike Lyons, Jane McRae and David Mickle are beginning to analyse the very large invertebrate and plant datasets that DEC has collected from Pilbara wetlands during the past 4 years with the collaboration of Russ Shiel, Brian Timms, Joan Powling, Dean Blinn and Stephen Skinner. Stuart and Jim Cocking have been struggling with the morphology of amphipods collected in a parallel survey of Pilbara groundwater fauna, while Terrie Finston of the University of WA has been looking at their genetics. Stuart intends writing up the overall results of the stygofauna survey between consulting jobs.
Lien Sim joined the wetlands research group in DEC last September to map wetlands of the Avon NRM region (about half the WA wheatbelt), identifying high value wetlands that need protection and those low value wetlands that may be able to receive hypersaline drainage water from salinised paddocks with minimal biodiversity loss. After making very significant progress with remote sensing techniques, Lien will be leaving at the end of June to sample motherhood.
John Lizamore has recently joined the team to undertake a wetland mapping, classification and evaluation project across the rest of the Wheatbelt, paralleling some of Lien's work in the Avon. John brings a strong GIS background to the project, and will also utilize remote-sensing techniques in the mapping and classification of wetlands.
David Cale and Melita Pennifold are continuing DEC's detailed long-term monitoring of south-west wetlands, and the numbers of species they are finding at some of these sites are continuing to increase.

Stuart Halse

FRESHWATER LAB, UNIVERSITY OF TASMANIA

UTAS
University of Tasmania

Our big news was a jam-packed whirlwind visit by a team of 6 limnologists from Denmark's National Environmental Research Institute and the University of Copenhagen as part of the Galathea 3 project. Many, many thanks to Dave Jarvis, Terry Byard, Andrew Tailor, Stuart Chilcott and Viv Spencerof the Inland Fisheries Service, who facilitated their initial field sampling and helped our

colleagues get to grips with platypus and other local difficulties when sampling fish. Also a big thank you Dan Warfe, Scott Hardie, Mike Driessen, Jayne Balmer (all from various parts of DPIW), staff at the Queenstown part of the Parks and Wildlife Service for help with permits, and access and Carolyn Maxwell from Hydro Tasmania for advice about Lagoon of Islands. 14 lakes in 16 days ranging from Lakes Leake and Tooms in the east to Dora and Selina in the west got sampled for stable isotope food-web variables, phytoplankton, zooplankton, replicated shallow cores and at least one long core from each lake. Tasmania was chosen as the southern temperate continental island as part of Galathea 3's overall goals of testing hypotheses about changes in foodweb structure relative to isolation and climatic gradients. The core material will also be used to try to get handles on fine-scale changes in lake flora and fauna over the last 200 yr using subfossils and pigments. For the life-listers amongst you, the team consisted of Sussanne Lildal Amsinck, Frank Landkildehus, Kirsten Thomsen, Kirsten Christoffersen, Marc Ventura, and Teresa Buchaca. Marc and Teresa are Catalonian post-docs at NERI, and let on that veritable army of technicians would be swarming over the samples when the returned to Denmark; they ruefully admitted that such resourcing never happened in Spain -- which sounds pretty much like Tasmania, so we got along very well! Unfortunately, the project leaders, Erik Jeppesen and Martin Sondergaard weren't able to come at the last minute, but it was a very speedy but enjoyable time for all of us involved, and we hope that it's the start of a very productive collaboration.

Meantime, Scott Hardie has completed his Ph.D. thesis on the conservation biology of golden galaxias, a fish endemic to just two lakes in Tasmania, and Adam Uytendaal is now fully doctored after his solving of the limnological paradox of the same two lakes (the paradox being identified by the legendary Cheng and Tyler back in the 1970s). Rick Stuart-Smith continues his write-up on the foraging ecology of the same fish, and Louise Cromer is closing on completing her thesis on the palaelimnology and zoogeography of Antarctic lakes. John Gibson, one of her co-supervisors, is now working for BlueNet (another giant marine database; we hope he emerges with his brains in tact), but is hoping to get some support to chase experts on lacustrine tardigrades to help interpret the Antarctic cores better.

But we haven't forgotten rivers either. Anne Waston continues to stare at what used to be the Macquarie River wondering if it will ever rain again. Plan A was to investigate OM transport and dynamics around high flow events in regulated and unregulated tributaries of this River as part of Dan Warfe's TEFlows (=Tasmanian Environmental Flows) project. So, having torn that up and Plans B, C and D, we're currently thinking of inventive ways of using the Worst Drought on Record as an Opportunity. That'll make it rain.

Leon Barmuta

UNIVERSITY OF NEW ENGLAND AQUATIC RESEARCH

Good rains in February have everyone smiling up here on the New England Tablelands, along with some new faces joining us for projects starting this year. Down at the Grafton Aquaculture Centre, David Foley has started a PhD on silver perch aquaculture working with Stuart Rowland, Geoff Allen, Glenn Wilson and Andrew Boulton. His project is aimed at assessing the viability of silver perch aquaculture in ring tanks on cotton farms and this year's initial studies will focus on the crucial stage of refining suitable densities, diets, and husbandry methods. Lisa Thurtell, working with Keith Bishop on water quality issues in the Manning River, has begun her Phd with some support from mid-coast water to explore sources, sinks and transformations of nutrients, especially P, in the manning system. Peter Berney has also commenced a PhD with Glenn looking at vegetation on floodplains along the Gwydir River, building on some of the work by Rob McCosker and John Duggin in the early 1990s. Further new faces are Honours students Luke Mitchell and Mick Warner tackling a research project on predicted effects of pipeline breakages or seepages on rainforest streams near Lismore, working with Darren Ryder and Andrew Boulton, supported by funding from Rous Water.

One bit of big news has been the environmental flow release of 1400 ML down the Paterson River in early February, after negotiations between DNR, the Paterson Water Users Association, and other agencies. Sally Maxwell and Rob Rolls have been sampling macroinvertebrates and juvenile and larval fish from three sites along four rivers (two unregulated, two regulated - including the Paterson) to see whether the release elicits any changes in foodweb linkages or community composition in the short-term. Although the release was of hypolimnetic water, low dissolved oxygen concentrations did not persist far downstream during the 5-day release although water temperatures fell to about 15 C from the low 20s. Stay tuned for the longer-term ecological responses.

Finally, a quick update on the project on low flows in the Nymboida River being done by Em Warner and Rob Veal, working with Barb Downes, Darren Ryder and Andrew Boulton, supported by North Coast Water. Rob has completed counting his bugs from his water diversion experiments and early indications are of strong trends of redistribution of midge larvae, mayflies and some of the caddisflies in response to changes in flow velocities, both upstream and downstream of the extraction point, indicating potential for recovery with higher flows. Em found a different response by her biofilms from one year to the next, indicating you should never repeat any ecological experiment twice. More on the other students' and post-docs' projects in the next instalment, including what Darren has to show for his study leave trip to WA.

Andrew Boulton

UNIVERSITY OF WESTERN AUSTRALIA
Centre of Excellence in Natural Resource Management

THE UNIVERSITY OF WESTERN AUSTRALIA

As this is CENRMs first foray into the ASL Newsletter, a few introductions may be appropriate. In terms of the "watery" arm, the Centre includes Prof. Peter (M.) Davies, Dr Barbara Cook together with her team Geraldine Janicke, Judy Maughan and Susan Blanford (macroinvertebrates), Prof. Peter Cook (aquaculture), Dr Gavin Gouws, Paul Close (estuarine/ freshwater fish ecology) and Rebecca Dobbs (macroinvertebrates)

Peter M. Davies has been busy with International Water Centre activities especially with one component "Linking water to human health in fragile nations of the Pacific". Peter also reports that the IWC has recently launched its Master of Integrated Water Management: a three semester educational program, and that the collaborative TRACK (Tropical River And Coastal Knowledge) Hub will commence in mid April 2007. The two Peters have also been collaborating on several projects in the Pilbara investigating the potential impacts of heavy metal contamination in Whim Creek and the ecological and indigenous socio-economic implications of road bridge construction associated with mining activities in the Turner and Yule river catchments. Peter Cook, our resident abalone expert, in collaboration with Fisheries WA and Murdoch University has also just completed a FRDC funded evaluation of greenlip abalone hatchery and nursery production.

Barbara Cook has been working feverishly putting together CENRMs Bachelor of Science Degree in Restoration Ecology which kicked off first semester 2006. In the brief periods between, we have often heard, in her dulcet South African tones, ..."what you MUST do.... is go and collect some more bugs..." to her devoted team of Geraldine, Judy and Susan, who are kept busy with both lab and fieldwork with multiple projects on the go. They have recently completed a collaborative project with Drs Jenny Davis and Karin Strehlow (Murdoch University) on the downstream impacts of deep drains in the central wheat belt of WA. Ongoing projects include ecological values of south coast rivers, Biodiversity hotspots in the Beaufort River, biomonitoring of Esperance wetlands and several projects assessing the environmental impacts of bluegum plantations and other land uses on aquatic ecosystems. Barbara also maintains a mobile electrophoresis laboratory (ex-ice-creamery refrigerator) and along with postdoctoral fellow Gavin Gouws has recently finished and published their research on phylogeography of freshwater crayfish and the taxonomy of SW Australian isopods. Gavin and Paul have also recently completed a short project on the genetic identification of cryptic gobiid larvae. This obviously interested Gavin immensely as he has recently returned to South

Africa to take up a new position with the South African Institute of Aquatic Biology – working with fish (!) - we wish him well.
Paul Close continues to (attempt) to balance completion of his PhD thesis on ecological water requirements (EWRs) of estuaries and working on a variety of estuarine related projects. Paul's PhD focuses on relationships between freshwater inflows, hydrodynamics and larval fish dynamics in intermittently open/closed estuaries on the south coast of Western Australia. As submission is imminent (!) Paul, together the Peters and Barbara have started work on a number of projects including EWRs for two rivers and two estuaries on the south coast of WA. Paul is also involved on several expert panels on sustainable diversion limits (winter-fill) for WA, and estuarine management plans for priority estuaries on the south coast of WA. Later this year Paul will be embarking on a research program investigating larval ecology of black bream – more on this next issue.
Rebecca Dobbs took time out of her (indefinite) world travels, to return to Albany and help Peter Davies with the coordination of the Aquatic Biology unit run by CENRM. Rebecca successfully fulfilled one of the course requirements of getting the students cold, wet and muddy while collecting field data from Albany streams in a two week long field based program. We all wish Dobbsy well on the next leg of her travels and look forward to seeing her again when she needs some more money!

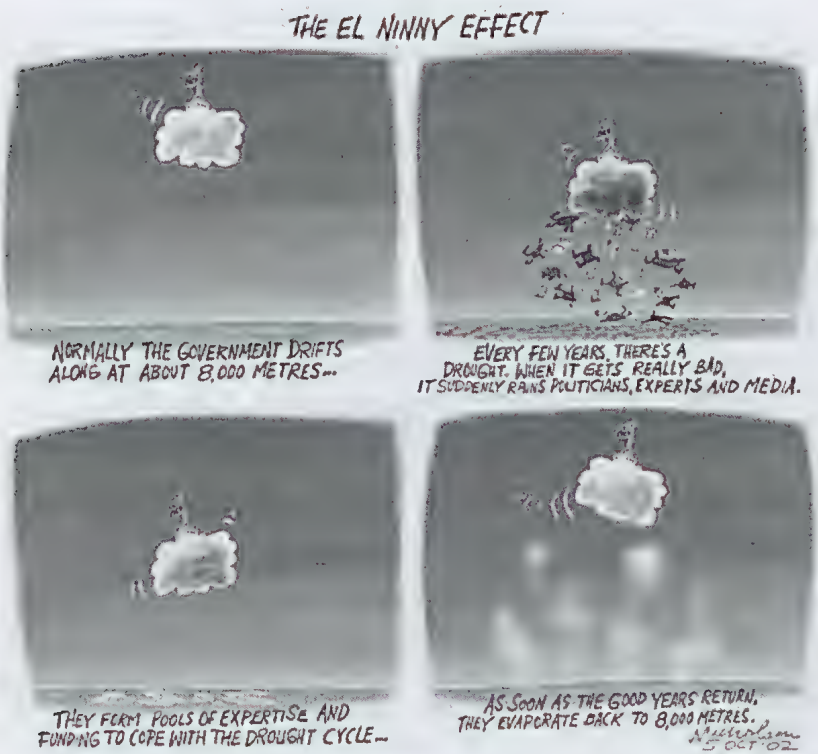
Paul Close

MONASH AQUATIC RESEARCH LABORATORY (MARL)

It's a bugger of a time to be studying anything wet in Victoria as Ross Thompson and Bob Wong, together with their students Will Sowersby and Ben Waincymer have discovered this summer. Work has commenced on non-migratory species of galaxiids in Victoria's north-east, but is hindered by a general lack of water. This same problem is suiting PhD student Elise King rather well as she studies community disassembly in drying pools, and provides Sam Lake with constant encouragement as he works on his drought book. Meanwhile Paul Reich (with Sam Lake & Matthew Johnson) continues his riparian restoration project and will be joined later in the year by PhD student Mardiana Ali, studying macrophytes. Nick Bond has continued with the planning phase of his eWater theme, and has somehow found a way to include jaunts in helicopters in his site survey work. Nick, Paul and Sam have all been actively publishing on their drought and restoration work and with Damien McMaster are also examining the ecological impacts of flow regime reversal within the Broken-Boosey Creek system. Urban stream research continues apace, with Honours student Sara Jacobs beginning her work on public perceptions of urban

streams and PhD student Sam Imberger about to begin her work on organic matter dynamics. In a similar vein Gareth Belton is approaching the end of his Honours work on the effects of urban-derived heavy metals on algal physiology and food quality. Meaghan Walker (biodiversity/ecosystem function relationships in the inter-tidal) and Penne Coleman (effects of stormwater wetlands in steams) are also entering the final phase of their Honours. On fishy themes, we welcome PhD students Suzie Ho (food web consequences of *Gambusia* invasions) and John Moringello (dispersal and recruitment of fish), and Honours student James Douglas (galaxiid/salmoniid interactions). So with many comings and goings we look forward to ...well, rain, this is getting ridiculous.

Ross Thompson (ross.thompson@sci.monash.edu.au)


THE EL NINNY EFFECT
NORMALLY THE GOVERNMENT DRIFTS ALONG AT ABOUT 8,000 METRES...
EVERY FEW YEARS, THERE'S A DROUGHT. WHEN IT GETS REALLY BAD, IT SUDDENLY RAINS POLITICIANS, EXPERTS AND MEDIA.
THEY FORM POOLS OF EXPERTISE AND FUNDING TO COPE WITH THE DROUGHT CYCLE...
AS SOON AS THE GOOD YEARS RETURN, THEY EVAPORATE BACK TO 8,000 METRES.
5 OCT '02

FORTHCOMING CONFERENCES / WORKSHOPS

water:
aninconvenienttruth
A southern hemisphere WARNING

JOINT MEETING OF THE
NEW ZEALAND FRESHWATER SCIENCES SOCIETY
AND THE AUSTRALIAN SOCIETY FOR LIMNOLOGY

Queenstown, New Zealand
3rd to 7th December 2007
Incorporating the 40th Anniversary of the NZFSS (LIMSOC)

We have three great speakers indicate their interest in giving plenary talks, providing the New Zealand, Australian and United States perspectives on issues of relevance to freshwater.
Morgan Williams is NZ's Parliamentary Commissioner for the Environment (http://www.pce.govt.nz)
Peter Cullen (http://www.thinkers.sa.gov.au/pcullen.html) is fundamentally involved in the freshwater problems besetting Australia.
Bruce Wallace (Professor of Entomology and Ecology at the University of Georgia, Athens, Georgia (USA)
(http://www.uga.edu/ecology/people/faculty/wallace.htm)

Venue:
Millennium Hotel Queenstown (Conference Venue and accommodation)
Corner Frankton Road and Stanley Street, PO Box 551, Queenstown, NZ
tel: +64 3 441 8888 fax: +64 3 441 8889 reservation: +64 9 309 4420
email: millennium.queenstown@millenniumhotels.co.nz see:
(http://www.millenniumhotels.com/MCIL.nsf/lu_hoteldoc/71$$hoteldescription?opendocument) for details.
AND
Copthorne Hotel and Resort Queenstown Lakefront
Corner Frankton Rd & Adelaide St, Private Bag, Queenstown, New Zealand

tel: +64 3 442 8123 fax: +64 3 442 7472 reservation: +64 9 309 4420
email: copthorne.lakefront@millenniumhotels.co.nz see:
(http://www.millenniumhotels.com/MCIL.nsf/lu_hoteldoc/84$$hotelDescription?OpenDocument&cid=nb11747)

Accommodation:

- 170 and 200 rooms (mix of twin/single) are being held at Millennium Hotel and Copthorne Hotel. Rooms at Backpackers will also be arranged for Student accommodation.

Airlines:

Queenstown Airport (http://www.queenstownairport.co.nz/) is serviced by:

- Air New Zealand (http://www.airnewzealand.co.nz/default.htm)
- Quantas (http://www.qantas.com.au/)

Preliminary Meeting Schedule:

- **Sunday December 2nd - Workshops**
  Proposed Workshops include:
  - Fisheries Assessment Protocols - Envirolink Tools Project Workshop: Convener - Chris Arbuckle
  - Taxonomic Fair (macro invertebrates, fish, macrophytes): Convener - Dr Jon Harding
  - Public session - water: an inconvenienttruth: Convener - Dr Marc Schallenberg.
- **Monday December 3rd - Conference Opening Session**
  - 1pm - Opening Ceremony.
  - 1.40pm - Guest to open TBA.
  - 2pm - Morgan Williams, "New Zealand Inconvenient Truth" (40mins, plus 10mins questions)
  - 2.50pm - Peter Cullen, "Australian Inconvenient Truth" (40mins, plus 10mins questions)
  - 3.30pm - Afternoon Tea
  - 4pm - Bruce Wallis, "USA Inconvenient Truth" (40mins, plus 10mins questions)
  - 4.50pm - Drinks
  - 5.20pm - 6pm - Panel discussion (with drinks in hand).
- **Tuesday December 4th - Presentations.**
- **Wednesday December 5th - Presentations and Poster Session.**
- **Thursday December 6th - Presentations.**
- **Friday December 7th - Field Trips.**

Call for Papers:
Abstract submission (Presentation and Poster) from 1 September 2007 with deadline for papers 30 September 2007.

Presentations Format:

Oral Presentations: Contributed and invited presentations are limited to 12-13 minutes plus 2-3 minutes for discussion (**maximum 15 minutes per presenter**). Session moderators will strictly enforce these limits. Powerpoint presentations are the only format allowed for oral presentations.

Posters: The Conference Committee strongly encourages participants to consider submission for poster presentations. Posters are an excellent medium for detailed and extended discussion of your research and allow for complex charts, graphs, tables, or photographs that are difficult to present in an oral presentation session. This year we will have a special poster session on the Wednesday afternoon, where authors will be expected to attend their poster.

Web site: http://limsoc.rsnz.org/

Conference Committee:
Chris Arbuckle (Chair), Environment Southland. Email: chris.arbuckle@es.govt.nz
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SOCIETY FOR CONSERVATION BIOLOGY: INAUGURAL REGIONAL MEETING.

The Biodiversity Extinction Crisis, a Pacific response.
July 10-13, 2007.
University of New South Wales
Sydney
www.biodiversity2007.com
Richard.Kingsford@unsw.edu.au

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3rd International Symposium on Riverine Landscapes

Global change and river-floodplain ecosystems

August 27 – September 1, 2007, South Stradbroke Island, Queensland, Australia
http://www.griffith.edu.au/conference/tisorl2007/

Second announcement and call for posters

There are a number of grand challenges facing science in meeting the knowledge needs to underpin ecologically sustainable management of river-floodplain ecosystems. Scientists and research students are invited to the 3rd International Symposium on Riverine Landscapes (TISORL) to discuss the implications of global-scale changes for river-floodplain ecosystems and to identify future research directions. Invited presentations will consider the effects of urbanisation and landuse change, water resource development, and climate change on river-floodplain ecosystems. Several concurrent workshops on science needs will focus on aquatic biodiversity, connectivity and river-floodplain-coastal subsidies, flow-ecology relationships, and indicators and assessment. Poster sessions will provide opportunities for attendees to present research relating to the science themes and workshop topics.

Invited speakers and workshop chairs – Joseph Alcamo, Angela Arthington, Emily Bernhardt, Nick Bond, Francis Chiew, Cliff Dahm, Michael Douglas,

David Dudgeon, Sarah Gergel, Joyeeta Gupta, Stephen Hamilton, Jane Hughes, Roland Jansson, Christoph Matthaei, Robert Naiman, Christer Nilsson, Julian Olden, Jon Olley, N. LeRoy Poff, Cathy Reidy, Andy Steven, Caroline Sullivan, Rebecca Tharme, Klement Tockner, Charlie Vörösmarty and Chris Walsh.

Venue - Couran Cove Island Resort on Stradbroke Island, south-east Queensland, Australia (visit www.courancove.com.au).

Date - Monday August 27 to Saturday September 1 2007. This is the week prior to 10th International Riversymposium and 2nd International Environmental Flows Conference in nearby Brisbane.

Deadlines

April 23rd 2007 - Deadline for submission of poster abstracts, start of review process

April 30th 2007 - Notification of acceptance of poster abstracts

May 14th 2007 - Close of Early Bird Registration

June 11th 2007 - Final date for Registration (late payment fee applies after this)

Registration - We encourage early registration as Symposium attendance is limited to about 100 people. Instructions on registration, abstract submission and accommodation bookings are available at the Symposium website: http://www.griffith.edu.au/conference/tisorl2007/

Contacts - For further details contact Dr Mark Kennard (m.kennard@griffith.edu.au) or Prof. Stuart Bunn (s.bunn@griffith.edu.au) from the Australian Rivers Institute, Griffith University (www.rivers.edu.au)

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